

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP2004/013872

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 F04B27/02 F04B39/00 F02B75/24

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 F04B F02B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	FR 1 023 818 A (JULIEN, MAURICE-FRANCOIS-ALEXANDRE) 24 March 1953 (1953-03-24) page 1, column 1, line 1 - line 14 page 3, column 1, line 15 - page 5, column 2, line 20 figures 2,4	1-7
Y	US 6 202 537 B1 (CATERPILLAR INC.) 20 March 2001 (2001-03-20) column 1, line 66 - column 2, line 46 figures 1,2	1-7
A	DE 31 32 144 A1 (VOLKSWAGENWERK AG) 3 March 1983 (1983-03-03) abstract figure 1	1,7
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
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- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \* & \* document member of the same patent family

Date of the actual completion of the international search

2 March 2005

Date of mailing of the international search report

10/03/2005

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 506 239 A (DRESSER-RAND COMPANY) 30 September 1992 (1992-09-30) column 1, line 1 - line 38 column 2, line 54 - column 3, line 28 figures 4,5 -----	1,7
A	US 3 581 583 A (NUOVO PIGNONE S.P.A.) 1 June 1971 (1971-06-01) column 1, line 4 - line 15 column 2, line 55 - column 3, line 37 figures 2,3 -----	1,7

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/013872

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
FR 1023818	A	24-03-1953	NONE	
US 6202537	B1	20-03-2001	NONE	
DE 3132144	A1	03-03-1983	NONE	
EP 0506239	A	30-09-1992	US 5062311 A CA 2063698 A1 CN 1065513 A ,C DE 69202605 D1 DE 69202605 T2 EP 0506239 A1	05-11-1991 30-09-1992 21-10-1992 29-06-1995 23-11-1995 30-09-1992
US 3581583	A	01-06-1971	GB 1212324 A	11-11-1970